

IN THE CLAIMS

GI 6 10. (fourth amendment) A packing ring for use in forming a seal with a turbine shaft rotatably mounted within the casing of an axial flow elastic fluid turbine, wherein said axial flow elastic fluid turbine includes at least one stage having (i) at least one diaphragm stationarily mounted in said casting and having a plurality of steam directing nozzles, and (ii) a rotor fixedly attached to said turbine shaft and having a plurality of blades bounded by a shroud and disposed adjacent said plurality of steam directing nozzles, said packing ring having a plurality of packing ring segments adapted to be mounted in a groove circumferentially in said diaphragm for forming a seal with said turbine shaft, each said packing ring segment comprising:

an inner ring portion having a plurality of brush segments mounted within a brush mounting groove formed in said inner ring, each said brush segment having a packet of bristles with said bristles having tip portions trimmed to terminate along a radius of curvature adapted to form a steam seal with said turbine shaft, each said bristle being adapted to be disposed in a plane substantially parallel to the principal plane of said rotor and extending in the direction of rotation of said turbine shaft;

an outer ring portion adapted to be disposed within said circumferential groove for both axial and radial movement of said

segment therein and having a pair of shoulders extending axially in opposite directions adapted for making radial contact respectively with a pair of spaced apart shoulders on said casing and thereby adapted for limiting movement of said segment radially with respect to said shaft;

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a neck portion connected between said inner arcuate portion and said outer ring portion and adapted for extending between said casing shoulders, said neck portion having an axial thickness which is adapted to be less than the distance between said opposing casing shoulders to thereby be adapted to axially locate said seal ring segment against one of said casing shoulders and provide a contact pressure seal at the side of said neck portion which is subject to lower fluid pressure; and

a radial positioning means comprising a spring against said ring segments adapted to forcibly cause said segments to move radially outward away from said shaft, whereas working fluid flowing into the annular space between said casing and said ring segments will urge said segments radially inward towards said shaft, whereby at low speed and small turbine loads the spring forces will predominate, while at high flows and high working fluid pressure the pressure forces will predominate.

Please add the following claim.

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38. (New) A packing ring for sealing a shaft in a steam turbine, the
packing ring disposed in a groove of a diaphragm in a casing of the steam
turbine, comprising:

- a. a plurality of ring segments, ring segment having an inner face adapted to form a steam seal with the shaft, and having a brush mounted on said inner face, having bristles adapted to form a steam seal with the shaft;
- b. at least one spring, for biasing one or more of said ring segments radially away from the shaft; and
- c. a steam biasing means, for biasing said ring segments radially toward the shaft upon a sufficient build up of steam pressure within the turbine, whereby the force of said spring will predominate during low speeds and turbine loads, and whereby the force of said steam biasing means will predominate during high speeds and turbine loads.

~~Please cancel claims 1-4 without prejudice.~~